1856MNRAS..16..161M

Struve's investigation of the parallax of Argelander's star, which had formed the subject of some critical remarks by Dr. Wichmann.

There is also an Appendix, in which he replies to some objections offered by Dr. Peters to the labours of the same astronomer in No. 865 of the *Astronomische Nachrichten.*

Notes on the Meteor of January 7, 1856.

By Robert James Mann, M.D.

A very brilliant meteor crossed the sky of the south of England during the twilight hour of January 7th, 1856. The writer, happening to be amongst those who were so fortunate as to see it, has thought it well to transmit a few notes on the subject to the Royal Astronomical Society, upon the chance of there being some point that came within the scope of his observation and inquiries which may prove worthy of the notice of such of the fellows of the Society, as particularly interest themselves with meteoric phenomena.

The meteor presented itself at Ventnor, on the south coast of the Isle of Wight, at 5 minutes before 5, local time. The sky was perfectly clear at the instant, excepting for a low cloud-bank, extending from the west pretty well round the horizon. The sun had set nearly three quarters of an hour before; but the twilight was still so strong, that the diminution of daylight was not very obvious. The planet *Jupiter* had passed the meridian an hour and forty minutes, and was only to be discerned after looking for it very closely in the exact position that it occupied. No other star was visible to the unaided eye.

When the meteor appeared, the writer was walking eastwards, along a road open to the sea towards the south. He was suddenly startled by the sense of a great blaze moving along high up in the sky to the right, accompanied with a slight rushing sound.

The flame assumed the form of a disc or ball, very distinctly. It was of an intense whitish-blue hue, and became brighter and bluer as it descended towards the horizon. The ball, too, seemed to assume progressively larger dimensions. When, at its largest development, it appeared to have a diameter of from seven to eight minutes of angular measure. The glare that it cast was as strong as that of a very vivid flash of lightning; but was, of course, more sustained. The blazing ball moved along with about the ordinary speed of the falling stars, when, about seven degrees above the horizon, and a little to the east of the meridian, it plunged into the low cloud-bank already alluded to, having, however lost some of its brightness before doing so, and finally disappeared.

When the meteoric flame had fallen to *within* 35 *degrees of the horizon*, it began to leave a tail of fire behind it, very similar to the trace that is left by a Roman candle on a dark night. The

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1856MNRAS..16..161M

upper and lower extremity of this tail faded out of sight almost as soon as it had been observed; but the central portion, through a range of from fifteen to twenty degrees, remained like a clear line of incandescent silver burnt into the sky. At first the line was almost "mathematical" in its fineness, having no discernible breadth, and was obviously composed of intensely incandescent substance; although so fine, it was remarkably bold and distinct to observation, in consequence of its brilliant whiteness. In a few seconds, however, it no less manifestly had acquired width, and then it went on growing broader, until almost in a couple of minutes it presented itself as a silvery white spindle-shaped cloud, standing boldly out from the clear sky. On this part of the phenomenon the writer's attention was very particularly fixed, and he is convinced that he saw the luminous trace pass gradually from the condition of fire, into that of reflective vapour.

When its nebulous character was fully declared, it had at first the character of a long, slender wand, very nearly straight, and stretching through an extent of between fifteen and twenty degrees. The central portion of this wand, however, soon began to bulge out, until the whole assumed the form of a spindle, tapering at each extremity. As it did this, the cloud-composition was more and more clearly declared, the cloud-substance being gathered together into subordinate masses, with clear streaks between them, until the general aspect of the object was of a freckled and then mottled character. As this change occurred, the extremities of the spindle began to bend themselves opposite ways, and the band itself become sinuous. After the lapse of two or three more minutes, the sinuous folds were developed, and the ribbon of cloud had obtained its full breadth. The general outline now very nearly approached to that of a serpent gathering itself up, and rearing upon its tail. Soon after this the central fold became more curved than the rest, and looked like the bend of a horse-shoe. At this period the sinuous object was evidently drifting away towards the south-east, and rising, balloon-like, to a higher elevation as it went, the middle portion having a more rapid motion than the extremities. The sinuous foldings were clearly effects of the different movements of the atmospheric strata through which the meteor-track was stretched. From this time the apparent dimensions of the cloudy object became smaller and smaller in consequence of increasing distance, and also its light waned progressively, and its extremities were shortened by advancing solution. Sixteen minutes after the fall of the meteor there remained nothing else visible in the sky but a very faint streak of inconspicuous, airless cloud, and in two minutes more was nothing but vacant air. The beautiful apparition had vanished entirely.

From a comparison of the observed position of the meteor in various places, the writer concludes that it fell to the earth within about ten or twelve miles of the coast of Normandy, and not very far from Isigny.

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